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None

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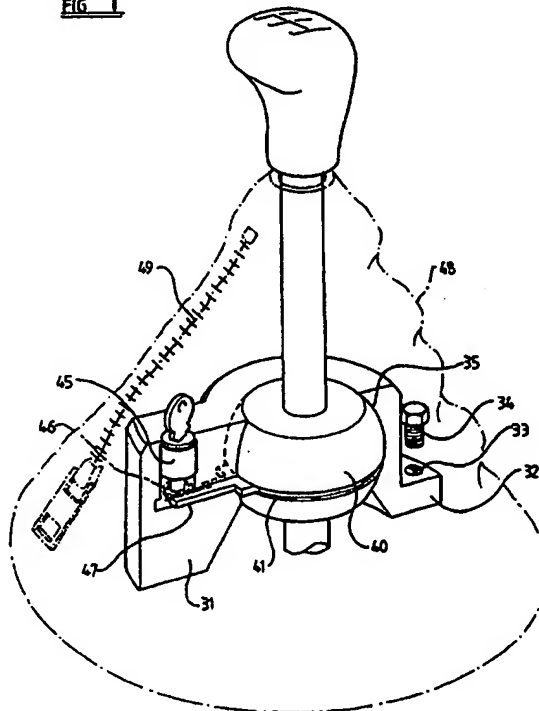
Clive Scott

(54) Abstract Title

**A theft deterrent device**

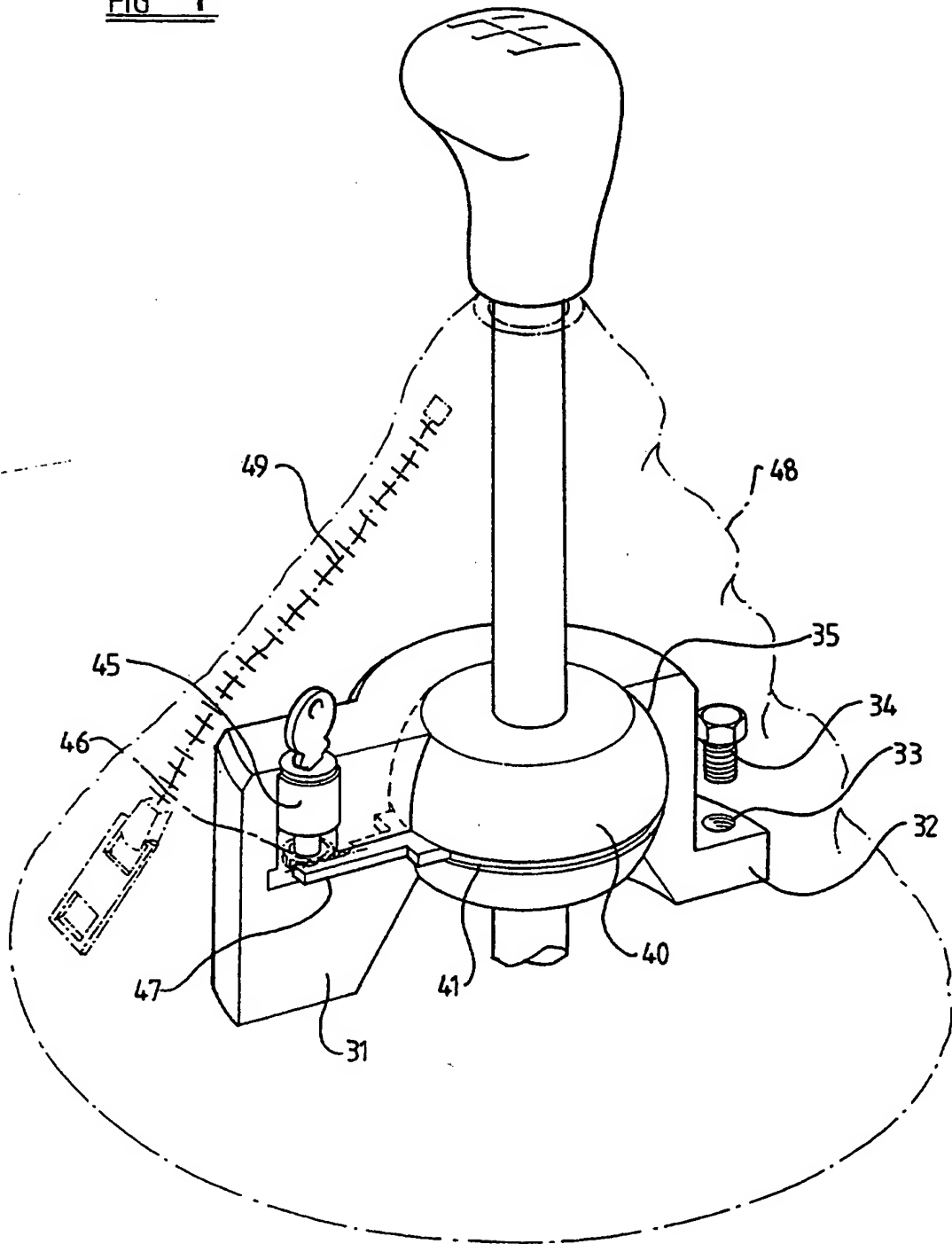
(57) A theft deterrent device for use in a motor vehicle is used to lock the gear stick in position. The device includes an outer housing 31 which can be secured to the motor vehicle. A part spherical element is provided which is mounted in a part spherical recess 35 in the housing, and which can move relative to the housing. The part spherical element defines a passage through which the gear stick of the motor vehicle may pass. A lock 45 is provided to lock the movable element in position, thus preventing movement of the gear stick.

FIG 1



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**FIG 1**



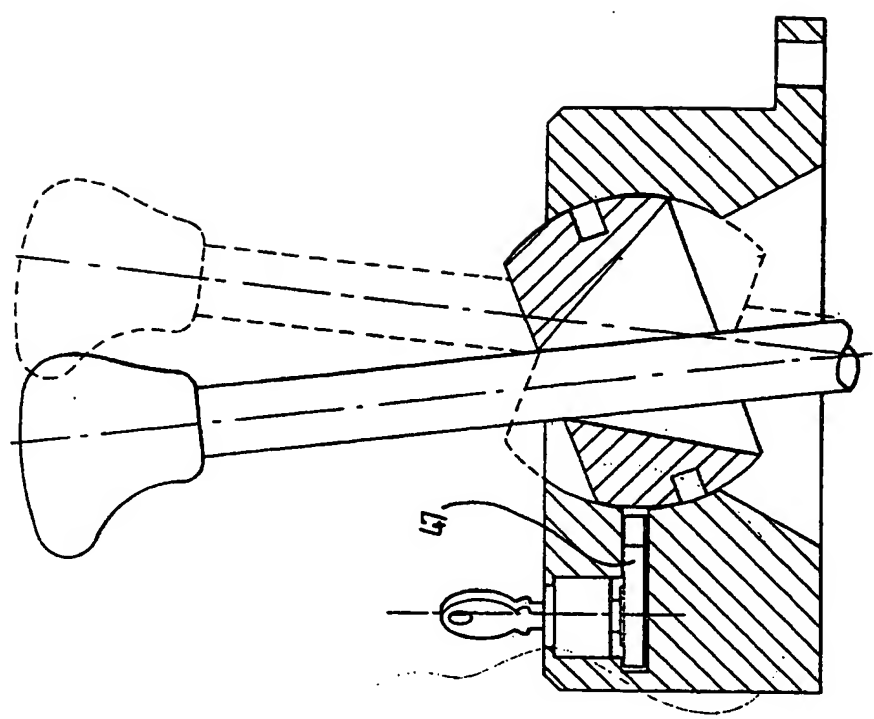


FIG. 3

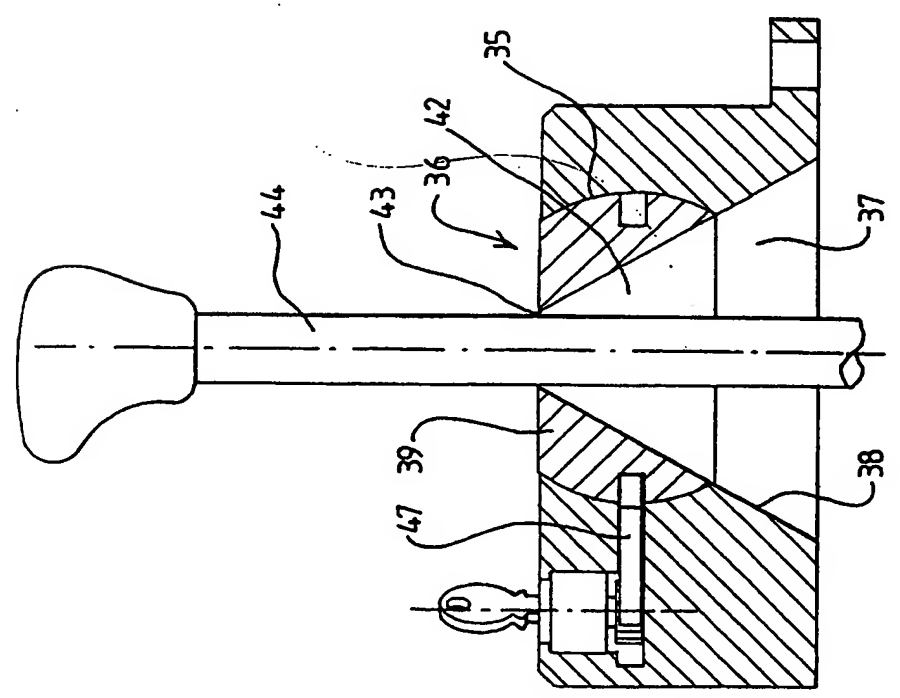


FIG. 2

PATENTS ACT 1977

Q10204GB-NF/jsd

**DESCRIPTION OF INVENTION**

**“IMPROVEMENTS IN OR RELATING TO A THEFT DETERRENT  
DEVICE”**

**THE PRESENT INVENTION** relates to a theft deterrent device, and in particular relates to a theft deterrent device intended for use with a motor vehicle.

The present invention seeks to provide a theft deterrent device adapted to deter thieves from stealing motor vehicles.

There is a need for an effective theft deterrent device which will deter thieves from stealing motor vehicles, and it is an object of the present invention to provide such a device.

According to this invention there is provided a theft deterrent device for use in a motor vehicle, the device comprising a housing, means to secure the housing to a motor vehicle, an element mounted on or in the housing for movement relative to the housing, the element defining a passage dimensioned to receive the gear stick of the motor vehicle, the housing defining a part spherical recess, said element having a part spherical exterior surface, being received within the part spherical recess for rotation therein, locking means being provided adapted to lock the movable element, to prevent substantial movement of the movable element and thus to prevent substantial movement of the gear stick.

Preferably the lock is a key operated lock adapted to drive a locking element between a locking position and a release position.

Conveniently the lock is carried by the said housing.

Advantageously the lock is received within the housing, adapted to drive a locking bolt from a retracted position to a position in which the locking bolt extends at least partly into the part spherical recess, the element being provided with a groove adapted to receive part of the locking bolt.

Conveniently the groove is an equatorial groove.

Preferably the housing is provided with a flange, the flange defining a plurality of apertures therethrough, the apertures being adapted to receive bolts to secure the housing to the motor vehicle.

Conveniently the bolts comprise shear headed bolts.

In order that the invention may be more readily understood, and so that further features thereof may be appreciated, the invention will now be described, by way of example, with reference to the accompanying drawings in which

FIGURE 1 is a perspective view of an embodiment of the invention,

FIGURE 2 is a sectional view through the embodiment of Figure 1, and

FIGURE 3 is a further sectional view through the embodiment of Figure 1 illustrating the operation of the embodiment.

As will become clearer from the following detailed description, a theft deterrent device intended for use in a motor vehicle comprises a housing which is adapted to be permanently secured to the motor vehicle. Mounted on the housing is an element embracing the gear stick of the motor vehicle. The element is adapted to move relative to the housing thus enabling the gear stick to be utilised. A locking mechanism is provided adapted to lock the element relative to the housing in one predetermined position. When the arrangement is in the locked condition the gear stick cannot be used to change gear.

In the embodiment illustrated in Figures 1 to 3, a housing 31 is provided, at least part of the periphery of the housing 31 being provided with a radially extending flange 32, the flange 32 having bores 33 therethrough adapted to receive bolts such as a shear bolt 34 to enable the housing to be securely connected to a motor vehicle.

The housing may be of any appropriate form, but part of the housing defines a part spherical recess 35, the part spherical recess 35 having an upper opening 36, and also having a lower opening 37. The lower opening may communicate with a diverging passage 38 formed within the housing 31.

A rotatable element 39 is received within the part spherical recess 35, the rotatable element 39 having a part spherical exterior surface 40. An equatorial groove 41 is present in the part spherical exterior surface 40.

A through-passage 42 is defined passing through the element 39, the through-passage 42 having a substantially circular upper end 43, the circular upper end having a diameter slightly greater than the diameter of a gear stick 44 in connection with which the device is to be used. The passage 42 diverges from the

upper end 43 in a substantially conical manner and, in one position of the rotatable element 39, as illustrated in Figure 2, the diverging through-passage 42 is substantially aligned with the diverging passage 38 in the housing 31.

Part of the housing 31 contains a key operated lock 45. The lock is adapted to drive a pinion 46 which, in turn, drives a locking bolt 47 from a retracted position to a locking position. Figures 2 and 3 show the locking bolt 47 in the locking position, part of the locking bolt has been driven into engagement with the equatorial groove 41 formed in the part spherical outer surface 40 of the rotatable element 39, thus locking the rotatable element 39 in position. When the locking bolt 47 has been retracted, as shown in Figure 3, the locking bolt 47 is withdrawn from the equatorial groove 41 and, indeed, is withdrawn totally from the part spherical recess, thus permitting the element 39 to rotate freely.

In use of the described embodiment, the housing 31 will be securely connected to a motor vehicle using the shear headed bolts 34, with the gear stick 44 of the motor vehicle passing through the rotatable element 39. A gaiter 48 maybe provided, with an associated zip 49, to conceal the arrangement.

When the locking bolt 47 is in the locking position, as illustrated in Figures 1 and 2, the rotatable element 39 cannot rotate, meaning that it is impossible to change gear in the motor vehicle whereas, when the locking element 47 is in the retracted position, as illustrated in Figure 3, the rotatable element can rotate, thus enabling the gear stick to be moved. Consequently, the motor vehicle may be utilised in the usual way.

It is to be understood that the housing maybe made of any suitable material, but it is preferred to utilise a strong material, which is resistant to drilling

or sawing. Similarly, the other components of the theft deterrent device may be made of a suitable strong material.

Whilst the invention has been described with reference to a specific embodiment, it is to be appreciated that many modifications may be effected without departing from the scope of the invention as defined in the following Claims.



**CLAIMS:**

1. A theft deterrent device for use in a motor vehicle, the device comprising a housing, means to secure the housing to a motor vehicle, an element mounted on or in the housing for movement relative to the housing, the element defining a passage dimensioned to receive the gear stick of the motor vehicle, the housing defining a part spherical recess, said element having a part spherical exterior surface, being received within the part spherical recess for rotation therein, locking means being provided adapted to lock the movable element, to prevent substantial movement of the movable element and thus to prevent substantial movement of the gear stick.
2. A device according to Claim 1 wherein the lock is a key operated lock adapted to drive a locking element between a locking position and a release position.
3. A locking arrangement according to Claim 2 wherein the lock is carried by the said housing.
4. A device according to any one of Claim 3 wherein the lock is received within the housing, adapted to drive a locking bolt from a retracted position to a position in which the locking bolt extends at least partly into the part spherical recess, the element being provided with a groove adapted to receive part of the locking bolt.
5. A device according to Claim 4 wherein the groove is an equatorial groove.

6. A device according to any one of the preceding Claims wherein the housing is provided with a flange, the flange defining a plurality of apertures therethrough, the apertures being adapted to receive bolts to secure the housing to the motor vehicle.

7. A device according to Claim 6 wherein the bolts comprise shear headed bolts.

8. A theft deterrent device substantially as herein described with reference to and as shown in Figures 1 to 3 of the accompanying drawings.



Application No: GB 9805555.1  
Claims searched: 1 to 8

Examiner: Colin Thompson  
Date of search: 7 May 1998

**Patents Act 1977**  
**Search Report under Section 17**

**Databases searched:**

UK Patent Office collections, including GB, EP, WO & US patent specifications, in:

UK Cl (Ed.P): B7J

Int Cl (Ed.6): B60R 25/00

Other: Online: WPI, EDOC

**Documents considered to be relevant:**

Category	Identity of document and relevant passage	Relevant to claims
	None	

X	Document indicating lack of novelty or inventive step	A	Document indicating technological background and/or state of the art.
Y	Document indicating lack of inventive step if combined with one or more other documents of same category.	P	Document published on or after the declared priority date but before the filing date of this invention.
&	Member of the same patent family	E	Patent document published on or after, but with priority date earlier than, the filing date of this application.